

ABSTRACT OF THE DISCLOSURE

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A process and system for enhanced storage of trajectories reduces storage requirements over conventional methods and systems. A video content analysis module automatically identifies objects in a video frame, and determines the (x_i, y_i) coordinates of each object i . The reference coordinates for each for object i , (x_{ref_i}, y_{ref_i}) are set to (x_i, y_i) when the object is first identified. For subsequent frames, if the new coordinates (x_{new_i}, y_{new_i}) are less than a given distance from the reference coordinates, that is if $\| (x_{new_i}, y_{new_i}) - (x_{ref_i}, y_{ref_i}) \|^2 < \epsilon$, then the current coordinates are ignored. However, if the object moves more than the distance ϵ , the current coordinates (x_{new_i}, y_{new_i}) are stored in the object's trajectory list, and we set the reference coordinates (x_{ref_i}, y_{ref_i}) to the object's current position. This process is repeated for all subsequent video frames. The resulting compact trajectory lists can then be written to memory or disk while they are being generated, or when they are complete.